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Date: November 1, 2018

To: The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
The Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, SC 29210

Docket title: Application of Duke Energy Progress, LLC for Approval of Proposed Electric Transportation Pilot and An Accounting Order to Defer Capital and Operating Expenses

Docket no: 2018-322-E

Siemens is pleased to provide this letter of support in the above-captioned docket. We respectfully urge the Commission to approve the Pilot. The Pilot will provide financial, environmental, health, and economic development benefits to South Carolinians including EV owners, ratepayers, schools, and others.

Siemens is a global leader in eMobility™ and considers eMobility to be a critical element in driving economic benefits from new investments and job opportunities, at the same time achieving the societal benefit of a cleaner environment. We have deployed over 100,000 EV chargers in 30+ countries. We operate in 180 countries and are the first corporation of our size to commit to being carbon-neutral by 2030. Siemens operates through 12 locations in South Carolina generating over $200 million in in-state sales and employing over 600 South Carolinians.

Siemens provides a wide variety of technology solutions to a broad spectrum of customers. They include EV owners, utilities, federal and state governments, cities, site owners (both residential and commercial, including for workplace charging), transit authorities, non-utility charging network providers, etc. Siemens's offering in eMobility encompasses what we refer to as the *Plug to Grid*™ hardware and software ecosystem – and includes light, medium, heavy-duty vehicles as well as off road solutions such as:

- hardware and software for charging light, medium, and heavy duty vehicles;
- software and services, including smart phone apps, for managing charging and engaging electric vehicle and electricity customers;
- make-ready equipment ranging from transformers to service drops;
- utility software to plan, operate, and manage the grid, including integrating EV charging into system operations;

- software to run transmission grids and wholesale electricity markets;
- battery storage and microgrid systems for DC fast charging installations; and
- building management and operations software that can integrate EV charging operations.

Siemens sees eMobility as a pivotal trend not just for people but any item that needs to move from one point to another – a the goal of our policy efforts is to promote public policies and global best practices to drive market growth and consumer adoption of EVs.

There are a number of barriers to EV adoption, but one of the largest is availability of charging infrastructure. According to a 2016 survey conducted by Altman Vilandrie & Company, 85 percent of Americans interested in purchasing an EV believe charging infrastructure is inadequate.[1] Given that this is a nascent market, EV charging infrastructure today has not attracted sufficient investment to establish sufficient public charging stations, including at workplaces and multi-family dwelling units. In turn, the lack of charging stations continues to stunt the adoption of EVs.

Consider Morgan Stanley's prediction that 2025 could be a turning point for EVs. In its base case, it predicts that EVs will constitute 10 percent of new car sales in 2025, grow to 30 percent in 2035, and reach 70 percent in 2049. It prepared a more aggressive scenario putting EVs at 90 percent of new car sales by 2045. However, it also presented a bearish model – one that could be the result of insufficient charging infrastructure – that saw EVs at or below 10 percent of new car sales for the foreseeable future.[2]

The Pilot provides a meaningful step toward spanning this critical charging infrastructure gap and delivering the benefits of vehicle electrification to South Carolina.

The Pilot's first component is a residential EV charging program that is integrated with the grid. The program provides Level 2 (medium power) chargers to customers in exchange for allowing Duke to manage the charging. This will keep the load to off-peak hours and prevent any unnecessary additional load during peak hours. The added throughput of electricity used to charge the vehicles over existing infrastructure will spread the fixed costs over more kWh, thus reducing pressure on electricity rates and creating potential savings for all ratepayers.

The second and third components will facilitate the replacement of diesel school buses with efficient, zero-emission electric buses. It includes the provision of funding for both buses and chargers, leveraging other funding sources as well. This component has the benefit of reduced

[1] http://www.businesswire.com/news/home/20161208005809/en/High-Costs-Lack-Awareness-Threaten-Short-Electric
[2] https://electrek.co/2017/05/05/electric-vehicle-sales-vs-gas-2040/#jp-carousel-43397

air emissions, shared by all who live along the highway corridors used by these buses. It also helps achieve EPA air quality attainment rules. Schools will benefit from having the latest transportation technology. In addition, the buses will be integrated with the grid, allowing them to act as a generation resource in times of need or to reduce system peak demands.

The fourth component is for DC fast charging at public locations. This is a direct and immediate response to the need for public charging infrastructure. As noted above, the lack of such EV charging availability is a large barrier EV adoption and, therefore, to South Carolinians obtaining the many benefits associated with EVs.

In conclusion, Siemens respectfully encourages the Board to consider all of the aforementioned needs and benefits in reviewing and approving the Pilot.

Thank you,

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